Paper No. 16

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte JOHN K. HOCHMUTH

_____

Appeal No. 98-1310
Application 08/368,685[1]

_____

ON BRIEF

_____

Before CALVERT, MEISTER and NASE, ***Administrative Patent Judges***.

MEISTER, ***Administrative Patent Judge.***

DECISION ON APPEAL

John K. Hockmuth (the appellant) appeals from the final rejection of claims 1-5 and 8-17, the only claims remaining in

[1] Application for patent filed January 4, 1995.

the application.[2]

The appellant's invention pertains to a method for treating automotive engine exhaust gases and to an exhaust gas treatment system. Claims 1 and 10 are further illustrative of the appealed subject matter and a copy thereof may be found in the appendix to the brief.

The references relied on by the examiner are:

Laprade et al. (Laprade)	4,007,718	Feb. 15, 1977
Adamczyk, Jr. et al. (Adamczyk)	5,373,696	Dec. 20, 1994
Burk et al. (Burk)[3]	WO 94/11623	May 26, 1994

The answer states that the following rejections are applicable to the claims on appeal:[4]

Claims 1, 3-5 and 8-17 under 35 U.S.C. § 103 as being

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[2] Independent claims 1 and 10 have been amended subsequent to final rejection by an amendment filed on May 17, 1997 (Paper No. 11).

[3] The examiner has incorrectly referred to this reference by the name of the applicant (Engelhard), rather than by the name of the inventors (Burk et al.).

[4] In response to the amendment filed subsequent to final rejection the examiner indicated that the final rejection of the appealed claims under 35 U.S.C. § 112, second paragraph, had been overcome (see the advisory action mailed June 5, 1997 (Paper No. 12)).

unpatentable over Burk in view of Adamczyk.[5]

Claims 1 and 2 under 35 U.S.C. § 103 as being unpatentable over Burk in view of Laprade.

The rejections are explained on pages 2 and 3 of the final rejection. The arguments of the appellant and examiner in support of their respective positions may be found on pages 10-16 of the brief and page 4 of the answer.

OPINION

We have carefully reviewed the appellant's invention as described in the specification, the appealed claims, the prior art applied by the examiner and the respective positions advanced by the appellant in the brief and by the examiner in the answer. As a consequence of this review, we will sustain the rejection of claims 1 and 2 under 35 U.S.C. § 103 based on

[5] Claim 17 was not included in this rejection in the final rejection; however, it is apparent from the examiner's position that claim 17 was intended to be rejected on this ground. Accordingly, we conclude that the examiner's failure to include claim 17 was an inadvertent omission. The appellant is not prejudiced by this interpretation since, from the statement of issues on page 8 of the brief, it is clear the appellant recognized that the examiner intended claim 17 should be included.

the combined teachings of Burk and Laprade. We will not, however, sustain the rejection of claims 1, 3-5 and 8-17 under 35 U.S.C. § 103 based on the combined teachings of Burk and Adamczyk. Additionally, pursuant to our authority under the provisions of 37 CFR § 1.196(b), we will enter a new rejection of claims 8 and 9 under 35 U.S.C. § 103 based on the combined teachings of Burk and Laprade.

Considering first the rejection of claims 1, 3-5 and 8-17 under 35 U.S.C. § 103 as being unpatentable over Burk in view of Adamczyk, the examiner notes that Burk in the embodiment of Fig. 11 teaches adding supplemental air at a point downstream of the hydrocarbon trap 24 by means of an air pump 32 and thereafter concludes that it would have been obvious to use an air/fuel ratio sensor to control the air supply from the pump 32 of Burk in view of the teachings of Adamczyk. We will not support the examiner's position.

As to claims 1, 3-5, 8 and 9, we observe that independent claim 1 expressly sets forth the step of

> adding supplemental air, at one of the engine and a point downstream of the trap, to the exhaust during the hydrocarbon operating desorption period of the trap to maintain a substantially stoichiometric air/fuel balance in the exhaust gases flowing into the downstream catalyst zone.

There is nothing in Burk which either teaches or suggests such a limitation. With respect to the embodiment of Fig. 11, Burk on page 11 states that air is injected into the gas stream in amounts sufficient to provide 10 volume percent of O_2 in the gas stream for 5 seconds after each minute of stoichiometric operation. Although Burke does not expressly state why air is being injected in the embodiment of Fig. 11, it is apparently for the same reason set forth in the embodiment of Fig. 4, namely,

to promote the oxidation of hydrocarbon pollutants in the exhaust gas stream which in turn heats the exhaust gas stream because of the exothermic nature of the oxidation reaction (see page 29, lines 2-7). Indeed, the examiner even concedes that Burk "provides no disclosure of controlling supplemental air to the exhaust in response to sensing the exhaust air/fuel ratio and controlling the air for stoichiometric oxidation of

hydrocarbons in the downstream catalyst in figure 4 or 11" (answer, page 4).

Nevertheless, the examiner contends that it would have been obvious to provide such an arrangement in view of the teachings of Adamczyk. Adamczyk, however, teaches that when a three-way catalyst is used a computer controlled air pump will

> supply sufficient air ***to hydrocarbon adsorber 12*** such that the oxidant contained in the exhaust stream flowing into the catalyst is approximately at a stoichiometric air/fuel ratio. [Column 3, lines 49-52; emphasis added.]

Thus, although Adamczyk teaches that supplemental air should be added in order to maintain a substantially stoichiometric air/fuel balance in the exhaust gases when a three-way catalyst is used, the express teaching therein is that the supplemental air should be added to the hydrocarbon adsorber or trap, rather than at a point downstream of the trap as the examiner proposes. The examiner may not pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art (***Bausch & Lomb, Inc., v.***

Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), ***cert. denied***, 484 U.S. 823 (1987) and ***In re Kamm***, 452 F.2d 1052, 1057, 172 USPQ 298, 301-02 (CCPA 1972)), and obviousness cannot be established by locating references which describe various aspects of appellant's invention without also providing evidence of the motivating force which would impel one skilled in the art to do what the appellant has done (***Ex parte Levengood***, 28 USPQ2d 1300, 1302 (Bd. Pat. App. & Int. 1993)). Here, we find no persuasive evidence of a motivating force in the combined teachings of Burk and Adamczyk which would impel the artisan to add supplemental air "at one of the engine and a point downstream of the trap" in the manner expressly required by independent claim 1.

As to claims 10-17, even if the references were combined in the manner proposed by the examiner, the claimed invention would not result. That is, independent claim 10 expressly requires a "sensor/controller means . . . for sensing when the trap is desorbing hydrocarbons, for sensing the quantity of hydrocarbons in the exhaust gas stream . . . ." Although the

examiner apparently relies on Adamczyk for this limitation, the sensor 20 of Adamczyk is an oxygen sensor which senses the concentration of oxygen (see, e.g., column 3, lines 33-35), rather than hydrocarbons as claimed.

In view of the foregoing, we will not sustain the rejection of claims 1, 3-5 and 8-17 under 35 U.S.C. § 103 based on the combined teachings of Burk and Adamczyk.

Turning to the rejection of claims 1 and 2 under 35 U.S.C.
§ 103 as being unpatentable over Burk in view of Laprade, the appellant does not argue that it would have been unobvious to combine the teachings of Burk and Laprade in the manner proposed by the examiner. Instead the appellant argues that:

> Laprade discloses using a sensor (8) located in exhaust pipe (4) to control the air introduced to the engine via air pump (12) and air inlet (6). Laprade is merely showing the use of an air to fuel ratio sensor to control air to the engine intake. There is no indication or suggestion that such a measurement would be conducted to add the supplemental air during the hydrocarbon desorption period of a trap to maintain a substantially stoichiometric air to fuel balance in the exhaust gases flowing into the downstream catalyst zone. As indicated in the present application,

> Appellant avoids excess air which can dilute the desorbed hydrocarbons and cool the exhaust gas stream as it moves to a downstream catalyst. [Brief, page 15.]

We are unpersuaded by the appellant's arguments. The broad recitation in independent claim 1 of adding supplemental air at the engine "during the hydrocarbon operating desorption period of the trap . . ." does not limit the supplemental air being added ***only*** during the desorption period as the appellant appears to believe. In other words, there is simply no claim limitation which precludes the arrangement of Laprade wherein supplemental air is ***continuously*** added to the engine (i.e., during ***both*** desorption periods and non-desorption periods).[6] This being the case, we will sustain the rejection of claims 1 and 2 under
35 U.S.C. § 103 based on the combined teachings of Burk and Laprade.

Under the provisions of 37 CFR § 1.196(b) we make the following new rejection:

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[6] It is well settled that features not claimed may not be relied upon in support of patentability. ***In re Self***, 671 F.2d 1344, 1348, 213 USPQ 1, 5 (CCPA 1982).

Claims 8 and 9 are rejected under 35 U.S.C. § 103 as being unpatentable over Burk in view of Laprade as set forth in the examiner's rejection of claims 1 and 2 above. Claim 8 adds to claim 1 the limitation that the downstream catalyst consist essentially of an oxidation catalyst while claim 9 adds to claim 1 the limitation that the downstream catalyst comprise a three-way catalyst. Both of these arrangements are disclosed by Burk. Burk clearly discloses that the second catalyst (i.e., the downstream catalyst) may be the ***same as*** the first catalyst, giving a specific example of the TWC or three-way catalyst (see page 19, lines 28-30; see also page 6, lines 36 and 37, "at least one of the first and second catalysts is a three-way catalyst (TWC)"). On page 4, line 11, Burk also discloses that the first catalyst (and, hence, the second catalyst) may be "an oxidation catalyst."

In summary:

The rejection of claims 1, 3-5 and 8-17 under 35 U.S.C. § 103 based on the combined teachings of Burk and Adamczyk is reversed.

The rejection of claims 1 and 2 under 35 U.S.C. § 103 based on the combined teachings of Burk and Adamczyk is affirmed.

A new rejection of claims 8 and 9 under 35 U.S.C. § 103 has been made.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 CFR § 1.197(b) provides:

> (b) Appellant may file a single request for rehearing within two months from the date of the original decision . . . .

37 CFR § 1.196(b) also provides that the appellant, ***WITHIN TWO MONTHS FROM THE DATE OF THE DECISION***, must exercise

one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

> (1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .
>
> (2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 CFR § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final

action on the affirmed rejection, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART
37 CFR § 1.196(b)

IAN A. CALVERT Administrative Patent Judge	)	
JAMES M. MEISTER Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY V. NASE Administrative Patent Judge	)	

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